

Blue Bond Initiative for the Underwater Domain Awareness Framework

Blue Bonds: A brief overview

Estimated at over \$128 trillion USD, the bond market as the largest asset class in the global financial market, plays a vital role in catalyzing investments towards achieving the Sustainable Development Goals (SDGs) (IDB Invest, 2021). While similar to traditional bonds, proceeds from thematic bonds go towards projects contributing to sustainable development. The lower risk asset class and long-term nature of the bond market fits the profile of SDG-related activities, making it uniquely suited to catalyze the large-scale investments required to achieve the SDGs.

A sustainable ocean economy can lead to a triple win for the people, economy and nature by providing food for the growing population, almost unlimited renewable energy, and fighting climate change. Blue Bonds have the same structure as other thematic bonds, the issuers receive capital and agree to repay debt with interest over a period of time. However, issuers of blue bonds commit to using the majority if not all the proceeds, to finance or refinance blue projects.

Importance

The development of blue bonds has been instrumental in enabling countries to transition towards a Blue Economy. Blue bonds enable countries to raise the capital required to transition towards a blue economy (Hanna, 2019 as cited in Liang, 2020). Countries either issue their own blue bonds or partner with a third party to raise the capital required for the transformation towards a blue economy. It facilitates countries to utilize the capital raised to implement the required tools and mechanisms to shift current economic practices to projects with positive climate, environmental and economic benefits.

The main objective of issuing blue bonds is the reduction of the cost of capital for impact investors. International organizations such as the World Bank help blue bond issuance by providing a free credit guarantee to blue bond buyers. It significantly reduces investors' risk as in the instance the issuing party is unable to repay the borrowed funds, World Bank will repay the loan on their behalf (Junjeja, 2020).

UDA Framework

The Maritime Domain Awareness (MDA) is presently limited to the surface. With most of the maritime domain being underwater, it superficially addresses domain awareness and can be ineffective and detrimental in the long term (Das, 2021). Blue economy and national security are linked to the underwater domain. It is thus important to prioritize Underwater Domain Awareness (UDA) for effective and enhanced maritime governance.

The UDA will uncover the vast maritime resources in India's Exclusive Economic Zone, to utilize them to their full extent. With the rapid evolution of the blue economy, there has been an increase in noise levels under the sea, affecting the migration patterns of marine mammals. The economic opportunities in the region are waiting to be explored, both in terms of undersea resources and as a facilitator of growth. While it presents opportunities, there are concerns about the lack of maritime governance and sustainable growth in terms of ecological impact. UDA provides significance to the growing dependence of the world on the sea for food security and marine ecology.

The UDA framework recognizes the economic potential in the region that can be harnessed by nations. In the absence of a regulatory framework, the undersea resources are not being utilized in a sustainable manner. Precise input on the availability of resources is required for commercial activities, it allows an effective and efficient utilization of resources for economic benefits. It is focused on the undersea domain monitoring to address four main stakeholders: national security, disaster management establishments, environmental controllers and blue economy (Siddiqui, 2020). Blue bonds can help raise capital to invest in science and technology to develop viable and sustainable ways of undersea exploitation and exploration.

Blue Bonds Framework

Steps in issuing blue bonds

1. Align with existing global standards with International Capital Markets Association frameworks.
2. Develop a blue framework
 - Set a blue baseline
 - Develop clear, measurable targets or KPIs

- Disclose relevant sustainability performance metrics on a regular basis
3. Seek external review
- Second party opinion's offer transparency and credibility as it verifies the proposed use of proceeds, project selection and the evaluation process along with oversight and reporting structure.

Building a framework for blue bonds

While blue bonds are still in the initial phase, aligning with existing principles and standards will enable market development and ease investors. The creation of a blue criteria investors can evaluate the bond against, will further build a market foundation.

Development finance institutions were crucial to build credibility towards the green bonds. IDB Invest is committed towards developing the blue bond market in the same way. It can support companies interested in blue bond issuance while drawing institutional investors.

Like other thematic bonds, a framework for blue bonds is required to identify projects eligible for funding and ensuring transparency in project selection. Blue bonds can be issued as a subset of sustainable, social and green bonds, based on globally recognized principles, In the absence of blue bond principles, issuers are encouraged to adapt ICMA's green and social bond principles to blue use of proceeds. The UN Global Compact can act as a guide for responsible business practices.

The core of sustainable finance is the accomplishment of the SDGs. New sustainable financing mechanisms such as blue bonds incentivize ocean stewardship through clearly defined standards and moves issuer participation towards all 17 interconnected SDGs, in support of the blue economy.

To adapt blue bonds as a subcategory to social, sustainable or green bonds, the following factors should be taken into consideration:

1. The bond framework for the use of proceeds (UoP) should be substituted for an ocean or water related use.
2. The framework defining the eligibility criteria for the blue UoP must be verified externally through a second party opinion.

3. Investors will need to be educated by issuers on the blue economy criteria to demonstrate the UoP qualification as blue credibly.
4. Beyond the specific use of proceeds, potential blue bond issuers should demonstrate an overall commitment to advance the sustainable development goals at the corporate strategy level.

Seychelles

The Republic of Seychelles launched the world's first sovereign blue bond in 2018. Seychelles was recently classified as a high-income country, no longer becoming eligible for concessional funding it previously had access to. As a result, the government of Seychelles had to look for alternative funding sources to finance their transition to a blue economy (Liang, 2020).

The blue bond was pioneered with the aim of mobilizing private and public investment to assist the country in safeguarding their oceans and transitioning to sustainable fisheries while they sustainably developed their blue economy (World Bank, 2018a). Proceeds from the bond included improved governance of priority fisheries and expansion of marine protected areas.

The World Bank played a significant role in helping the government of Seychelles issue a custom ten-year maturity schedule aligning with the country's liability profile and funding needs. World Bank's \$5 million USD credit guarantee lowered borrowing costs by 2% per annum. It also arranged concessional funding from the Global Environmental Facility of \$5 million which further lowered the country's net borrowing cost by 3% p.a.

Green Bonds as precedence

Blue and green economy have a common foundation in ecological modernization, environmental protection and economic growth being linked through the incorporation of environmental issues into markets. (Schutter, Phelps & Waterton, 2021). The blue economy can be viewed as a new iteration of the revolution facilitated by the green economy.

Since the issuance of the first green bond by YES Bank in 2015, there has been a steady growth in issuances (YES Bank, 2020). These bonds have not only helped raise the much-needed capital for climate action in India, but also attracted domestic and foreign responsible investment in the country.

Guidelines for listing and issuing green bonds were introduced by The Securities Exchange Board of India in 2017, creating room for future growth. These guidelines could allow for other instruments such as blue bonds (Mora & Ang, 2021). With blue bonds being where green bonds were a decade ago, there are tremendous opportunities for growth.

Application to India

The progression towards a blue economy would provide coastal nations like India vast socio-economic opportunities to responsibly utilize its ocean resource for the benefit of society. It plays an important role in generating and sustaining livelihoods (Junejeja, 2021). 95% of India's business is supported by blue economy through transportation, contributing an estimated 4% to its Gross Domestic Product (GDP) (Fryenlud & Watal, 2021).

A coastline spanning over seven thousand kilometers and nine coastal states, India has a distinct maritime position. It has nearly 199 ports, of which 12 major ports process 1,400 million tons of cargo annually. India's Exclusive Economic Zones stretch across two million square kilometers, hosting vast living and non-living resources along with considerable recoverable resources like natural gas and crude oil (PIB Delhi, 2021). Additionally, four million fisherfolk and coastal communities are sustained by the country's coastal economy. Given these maritime interests, the blue economy plays an important role in India's economic growth. Provided socio economic welfare and sustainability are kept in focus, it has potential to become the next multiplier of GDP.

The United Nations member states, India included, adopted 17 sustainable development goals (SDGs) in 2015 to protect the planet and ensure peace and prosperity by 2030. SDG 14 aims to conserve and sustainably use seas, oceans and marine resources for sustainable development. As a result, initiatives to harness the blue economy have been undertaken by several countries.

Regulatory bodies and frameworks

The draft blue economy policy framework was prepared by the Ministry of Earth Sciences (MoES) in accordance with the Government of India's vision of New India by 2030. Blue economy was featured as one of the ten core dimensions for national growth. The framework is crucial towards unlocking the country's potential for welfare and economic growth. Comprising a system of manmade infrastructure and ocean resources, India's blue economy is a subset of the

national economy. The draft blue economy framework recommends initiating development of an effective plan to raise funds for blue growth through the aid of blue and green bond markets (Economic Advisory Council, 2020).

First announced in 2015, the Security and Growth for All in the Region (SAGAR) is India's policy of maritime cooperation in the Indian Ocean region (Byjus, 2020). Its primary vision is to advance cooperation and use capabilities for the benefit of the common maritime home. Through the SAGAR vision, India can enhance connectivity with its neighbors and leverage on the blue economy. The opportunity to meet national socio-economic challenges is further presented by a blue economy.

There has been an increase in dependence on NGOs in marine environmental governance for practical monitoring and implementation. This was facilitated by the International Monetary Fund's structural adjustment intervention in 2008 which led to government spending cuts (Petersson, 2020).

Limitations

There are sizeable costs associated with issuing a bond and as a result, most blue bonds need to be at least \$50 million to \$550 million in scale. A sizeable portfolio of blue projects must be identified to service that debt over time.

Similar to other thematic bonds, the financial aid given during the project building needs to be returned eventually. A problem arising with blue bonds is that the projects are not self-sustainable. They can generate money only if charges are levied on a beneficiary. Given the remote locations and vast nature of the oceans, it is difficult to identify beneficiaries. Often, government agencies are identified as the beneficiary and hence there is a limit to the amount of taxpayer money that can be assigned to such projects.

Blue bonds are one of the many finance mechanisms available to support blue economies and ocean health and while important, they are most suited for countries with sustainable economic activities, robust ocean governance and sizeable pipelines of loan projects. As a debt instrument, the money needs to be repaid to the investors with interest. It makes blue bonds difficult for marine protected areas disallowing economic activities and other conservation activities without a revenue base (Junjeja, 2020). A feasibility check is important before committing resources to

develop a blue bond. In addition, there are not yet a set of globally accepted blue bond principles under ICMA standards.

Future Opportunities

The World Bank believes the Seychelles blue bond could act as a model for other small developing island states and coastal countries. The launch of the blue bond signifies investors' increasing interest in the development of oceans and supporting sustainable management (World Bank, 2018a). The World Bank Treasury Thematic Bond Advisory provides support for issuing blue bonds to all World Bank member countries aiming to build blue economies.

Additionally, India's blue economy framework provides opportunities for stakeholders to explore and invest in these sectors for long term gains. All sectors across the blue economy have the potential to employ a large workforce in sectors such as fish processing, marine tourism, shipping, aquaculture and port activities. Research commissioned by the high-level panel for a sustainable ocean economy shows the high return on investment, with each dollar invested in key ocean activities yielding five times the return if not more (Fryenlud & Watal, 2021).

Expand eligibility criteria. Previous blue bonds issuances have focused on investments within marine restoration and conservation and water related infrastructure. The expansion of the eligibility criteria and framework for blue bonds will allow the bonds to also fund business opportunities positively impacting the ocean and supporting sustainable development. Blue bonds can benefit shoreline protection, ocean energy, aquaculture and seafood, trade and transportation and offshore renewables.

The creation of a broader consensus of what comprises 'blue' affirms issuers that previously believed the financing of their operations or assets did not fit within recognized green or sustainability bond frameworks. It validates those wanting to signal ocean stewardship.

Strong market appetite for issuing thematic bonds. Sustainable debt hit new levels in 2020, reaching \$732.1 billion across loan and bond varieties raised with social and environmental purposes in mind. There is a strong market for blue bonds as key stakeholders look to meet their sustainable portfolio goals, working towards a resilient recovery.

Research Direction

Blue bonds play an integral role in assisting countries reach the sustainable development goals and harness their resources in a sustainable manner. Research on blue bonds can be taken forward in the following ways:

1. **Sustainable fisheries:** Fisheries offer a vital source of food. A critical role can be played by the blue bond market towards the financing of sustainable development along the coastline and in oceans by mainstreaming emerging ocean industries such as sustainable fisheries, driving investments towards a blue economy. Destructive fishing practices, pollution have put critical fish habitats under pressure. Improved management of fisheries and protection of key habitats could lead to the restoration of the productivity of oceans, generating benefits worth billions in developing countries. It would ensure food security, growth and jobs for the coastal communities.
2. **Undersea mining:** Increasing demand for minerals due to the dwindling reserves of land-based mining highlight the potential undersea mining represents for trace metals and marine minerals. There is an urgent need for comprehensive ecosystem-based management practices for deep ocean environments subject to mineral extraction to ensure sustainable use of resources. Blue bonds will help the country raise funds to implement mechanisms for the preservation and effective stewardship of the marine environment while facilitating seabed mineral resources usage.
3. **Ports and Shipping:** Oceans are a vital repository and supporter of biological diversity, a key contributor to the global economy through sea-borne trade. Given India's dependence on ports for transportation, the oceanic route needs to be developed and regulated to ensure smooth operation.
4. **Inland Waterway Transport:** The Indian Water Transport (IWT) network comprises 14,500 kms of navigable waterways. Despite water transport presenting as a cheaper alternative, it only holds a 7% share in coastal shipping and 0.17% for Inland Water Transport. The revival plan of IWT requires public and private investment to fund the development of ports, infrastructure for shipping and navigation as well as road and rail connectivity. Blue bonds could help raise the required capital for such projects and aid in the development of the country.

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